

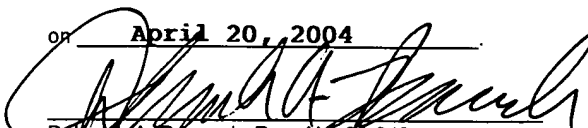


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Deborah A. Peacock, Reg. No. 31,649

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/661,319
Applicant(s) : Robert L. Armstrong, et al.
Filed : September 12, 2003
Title : OPTICAL DEVICES AND METHODS EMPLOYING NANOPARTICLES,
MICROCAVITIES AND SEMICONTINUOUS METAL FILMS

TC/A.U. : 2877
Examiner :

Docket No. : 37000-9906

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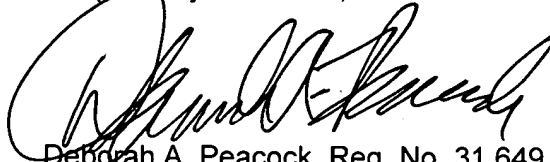
Pursuant to 37 C.F.R. §§ 1.97 and 1.98 and to the duty of disclosure set forth in 37 C.F.R. § 1.56, the Examiner in charge of the above-identified application is requested to consider and make of record the references listed on the PTO 1449 submitted herewith. A copy of each of the listed references is also enclosed.

Although the information submitted herewith may be "material" to the Examiner's consideration of the subject application, this submission is not intended to constitute an admission that such information is "prior references" as to the claimed invention.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.

This Information Disclosure Statement is being filed within three months of the filing date of the application or prior to the mailing date of a first Office action. Therefore, no fee or certification is required. 37 C.F.R. § 1.97(b).

Respectfully submitted,

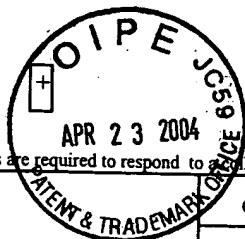


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Enclosures: PTO Form(s) 1449;
Copy of Reference(s)

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Application Number	10/661,319
Filing Date	September 12, 2003
First Named Inventor	ARMSTRONG, et al.
Group Art Unit	2877
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Sheet

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Attorney Docket Number 37000 CIP2 9906

U.S. PATENT DOCUMENTS

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		Number	Kind Code (if known)			
		5,249,195		L.C. Feldman, et al.	09/28/1993	
		5,363,398		A.M. Glass, et al.	11/08/1994	
		5,527,712	A	T.M. Sheeny	06/18/1996	
		4,781,458		S.M. Angel, et al.	11/01/1988	
		4,828,758		G.E. Gillberg-LaForce, et al.	05/09/1989	
		4,903,272		B. Simic-Glavaski	02/20/1990	
		4,913,845		G.E. Gillberg-LaForce, et al.	04/03/1990	
		5,234,758		A.W. Olsen, et al.	08/10/1993	
		5,237,211		K.T. Carron, et al.	07/05/1994	
		5,405,710		A. Dodabalapur, et al.	04/11/1995	

FOREIGN PATENT DOCUMENTS

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				Filing Date	September 12, 2003
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		Number	Kind Code (if known)			
		5,405,906		A. W. Olsen, et al.	04/11/1995	
		5,469,018		S.M. Jacobsen, et al.	11/21/1995	
		5,478,658		A. Dodabalapur, et al.	12/26/1995	
		5,616,986		S.M. Jacobsen, et al.	04/01/1997	
		5,674,636		A. Dodabalapur, et al.	10/07/1997	
		5,853,464		I.A. Macpherson, et al.	12/29/1998	
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		5,377,219	A	A.R. Geiger	12/27/1994	
		5,777,776		T. Hiraga, et al.	07/07/1998	
		5,847,816	A	M.S. Zediker, et al (Otaguro)	12/08/1998	
		5,952,655		R.N. Bhargava	09/14/1999	

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		EP	0 527 551	A1	Hitachi, Ltd.	17.02.1994		
		WO	91/20078	A1	BASF Aktiengesellschaft	26.12.1991		
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				Filing Date		September 12, 2003	
				First Named Inventor		ARMSTRONG, et al.	
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		V. M. Shalaev, <i>Nonlinear Optics of Random Media: Fractal Composites and Metal-Dielectric Films</i> , Springer Tracts in Modern Physics, v.158, Springer, Berlin Heidelberg 2000.	
		A. K. Sarychev and V. M. Shalaev, "Field Distribution, Anderson localization, and optical phenomena in random metal-dielectric films," Chapter in: <i>Optics of Nanostructured Materials</i> , Eds: V.A. Markel and T.F. George, Wiley, 2001.	
		V.M. Shalaev, "Surface-Enhanced Optical Phenomena in Nanostructured Fractal Materials," Chapter in: <i>Handbook of Nanostructured Materials and Nanotechnology</i> , Volume 4: Optical Properties, Edited by H. S. Nalwa, Academic Press, 2000	
		V. M. Shalaev, V. P. Safonov, E.Y. Poliakov, V. A. Markel, and A. K. Sarychev, "Fractal Surface Enhanced Optical Nonlinearities", Chapter 8: <i>Nanostructured Materials: Clusters, Composites, and Thin Films</i> , Eds; V. M. Shalaev and M. Moskovits, ACS Symposium Series v. 679, ACS Books, 1997	
		Local Field Distribution in Random Metal-Dielectric Films; Theory and Experiment, Dentcho A. Genov, Katyatani Seal, Mark A. Nelson, Andrey K. Sarychev, Z. Charles Ying, Vladimir M. Shalaev, Physica B 338, Pages 228-231 (2003)	
		Metal coverage dependence of local optical properties of semicontinuous metal films, K. Seal, M. A. Nelson, Z. C. Ying, D. A. Genov, A. K. Sarychev, and V. M. Shalaev, J. of Modern Optics 49, 2423-2435 (2002).	
		V. A. Podolskiy, A. K. Sarychev, V. M. Shalaev, "Temporal Dynamics of Local Optical Responses and Sub-fs Pulse Generation in Semicontinuous Metal Films," Laser Physics 12, 292 (2002).	
		M. Breit, V. A. Podolskiy, S. Gresillon, G. von Plessen, J. Feldmann, J. C. Rivoal, P. Gadenne, A. K. Sarychev, and Vladimir M. Shalaev, <i>Experimental observation of percolation-enhanced non-linear light scattering</i> , Phys. Rev. B 64, 125106 (2001).	

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				Filing Date	September 12, 2003
				First Named Inventor	ARMSTRONG, et al.
				Group Art Unit	2877
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		V. A. Podolskiy, A. K. Sarychev, and Vladimir M. Shalaev, Percolation Composites: Localization of Surface Plasmons and Enhanced Optical Nonlinearities, in Photonic Crystals and Light Localization in the 21st Century, 567, ed. by C. M. Soukoulis (Kluwer Academic Publishers, 2001).	
		M. Gadenne, V. Podolskiy, P. Gadenne, P. Sheng and V. M. Shalaev, Plasmon-enhanced absorption by optical phonons in metal-dielectric composites, Europhys. Lett. 53, 364 (2001).	
		V. M. Shalaev and Z. C. Ying, Nonlinear Optics of Surfaces, Encyclopedia of Materials: Science and Technology, ed. by D. D. Nolte (Pergamon, Amsterdam 2000), article 6.8.13	
		V. A. Shubin, A.K.Sarychev, J. P. Clerc, and V.M.Shalaev, Local Electric And Magnetic Fields In Semicontinuous Metal Films, Phys. Rev. B62, 11230 (2000).	
		A. K. Sarychev, V. A. Shubin, V. M. Shalaev, Anderson localization of surface plasmons and Kerr nonlinearity in semicontinuous metal Films, Physica B 279, 87 (2000).	
		A. K. Sarychev, P. C. McPhedran, and V. M. Shalaev, Electrodynamics of metal-dielectric composites and electromagnetic crystals, Phys. Rev. B 62, 8531 (2000).	
		S. Ducourtieux, S. Gresillon, A. C. Boccara, J. C. Rivoal, X. Quelin, P. Gadenne, V. P. Drachev, W. D. Bragg, V. P. Safonov, V. A. Podolskiy, Z. C. Ying, R. L. Armstrong, and Vladimir M. Shalaev, Percolation and Fractal Composites: Optical Studies, J. of Nonlinear Optical Physics and Materials 9, 105 (2000).	

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		S. Gresillon, L. Aigouy, A. C. Boccara, J. C. Rivoal, X. Quelin, C. Desmarest, P. Gadenne, V. A. Shubin, A. K. Sarychev, and V. M. Shalaev, Experimental Observation of Localized Optical Excitations in Random Metal-Dielectric Films, Phys. Rev. Lett. 82, 4520 (1999).	
		W. Kim, V. P. Safonov, V. M. Shalaev, R. L. Armstrong, Fractals in Microcavities: Giant Coupled Multiplicative Enhancement of Optical Responses, Phys. Rev. Lett. 82, 4811 (1999).	
		A. K. Sarychev, V. A. Shubin, and Vladimir M. Shalaev, Anderson localization of surface plasmons and nonlinear optics of metal-dielectric composites, Phys. Rev. B 60, 16389 (1999).	
		V. A. Shubin, W. Kim, V. P. Safonov, A. K. Sarychev, R. L. Armstrong, and Vladimir M. Shalaev, Surface-Plasmon-Enhanced Radiation Effects in Confined Photonic Systems, J. of Lightwave Technology 17, 2183 (1999).	
		E. Poliakov, V. M. Shalaev, V. Shubin, V. A. Markel, Enhancement of nonlinear processes near rough nanometer-structured surfaces obtained by deposition of fractal colloidal aggregates on a plain substrate, Phys. Rev. B 60, 10739 (1999).	
		N. N. Lepeshkin, W. Kim, V. P. Safonov, J. G. Zhu, R. L. Armstrong, C. W. White, R. A. Zuhr, and V. M. Shalaev, Optical Nonlinearities of Metal-Dielectric Composites, J. of Nonlinear Optical Physics and Materials 8, 191 (1999)	
		Vladimir M. Shalaev and Andrey K. Sarychev, Nonlinear optics of random metal-dielectric films, Phys. Rev. B 57, 13265 (1998).	
		Kneipp K., et al., "Surface-Enhanced Raman Scattering: A New Tool for Biomedical Spectroscopy," <i>Current Science</i> , Vol. 77, No. 7, pp 915-924 (Oct 10 1999)	

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		S. I. Bozhevolnyi, V. A. Markel, V. Coello, W. Kim, and V. M. Shalaev, Direct Observation of Localized Excitations on Rough Nanostructured Surfaces, Phys. Rev. B 58, 11441 (1998).	
		V. M. Shalaev, V. A. Markel, E. Y. Poliakov, R. L. Armstrong, V. P. Safonov, A. K. Sarychev, Nonlinear Optical Phenomena in Nanostructured Fractal Materials, J. Nonlinear Optic. Phys. and Materials, v. 7, 131 (1998).	
		V. M. Shalaev, E. Y. Poliakov, V. A. Markel, R. Botet, Nonlinear optics of fractal nanomaterials: Small-particle composites and self-affine thin films, Physica A 241, 249 (1997).	
		V. M. Shalaev, E. Y. Poliakov, V. A. Markel, R. Botet, E. B. Stechel, Optical properties of self-affine surfaces, in: Fractal Frontiers, Eds: M. M. Novak and T. G. Dewey, World Scientific, Singapore, 1997; p. 421.	
		V. M. Shalaev, E. Y. Poliakov, V. A. Markel, V. P. Safonov, A. K. Sarychev, Surface-Enhanced Optical Nonlinearities of Nanostructured Fractal Materials, Fractals, 5 (suppl.), 63 (1997). No copy available	
		F. Brouers, S. Blacher, A. N. Lagarkov, A. K. Sarychev, P. Gadenne, V. M. Shalaev, Theory of giant Raman scattering from semicontinuous films, Phys. Rev. B 55, 13234 (1997).	
		Vladimir M. Shalaev, E. Y. Poliakov, V. A. Markel, and R. Botet, Nonlinear Optics of Fractal Nanocomposites and Self-Affine Thin Films, Physica A 241, 249 (1997).	
		Vadim A. Markel, Vladimir M. Shalaev, Evgeni Y. Poliakov, Thomas F. George, Fluctuations of light scattered by fractal clusters, J. Opt. Soc. Amer., 14, 60 (1997).	
		Evgeni Y. Poliakov, Vladimir M. Shalaev, Vadim A. Markel, Robert Botet, Enhanced Raman scattering from self-affine thin films, Opt. Lett., 21, 1628 (1996).	
		Vladimir M. Shalaev, R. Botet, J. Mercer, and E. B. Stechel, Optical properties of self-affine thin films, Phys. Rev. B 54, 8235 (1996).	

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		Vladimir M. Shalaev, Mark I. Stockman, and R. Botet, Resonant excitations and nonlinear optics of fractals, Physica A 185, 181 (1992).	
		Vladimir M. Shalaev, R. Botet, and R. Jullien, Erratum: Resonant light scattering by fractal clusters, Phys. Rev. B 45, 7592 (1992).	
		Vladimir M. Shalaev, R. Botet, and R. Jullien, Resonant light scattering by fractal clusters, Phys. Rev. B44, 12216 (1991).	
		A.V. Butenko, P.A. Chubakov, Yu.E. Danilova, S.V. Karpov, A.K. Popov, S.G. Rautian, V.P. Safonov, V.V. Slabko, V.M. Shalaev, and M.I. Stockman, Nonlinear optics of metal fractal clusters, Z.Phys.D- Atoms, Molecules, and Clusters 17, 283 (1990).	
		P. Gadenne, B. Berini, S. Buil, X. Quelin, S. Gresillon, S. Ducourtieux, J. C. Rivoal, A. K. Sarychev, V. M. Shalaev, Localized plasmon-enhanced optical response: harmonic generation and polarization effects, Proceeding of SPIE's 46 Annual Meeting v. 4467, 288 (2001).	
		S. Gresillon, S. Ducourtieux, L. Aigouy, A. C. Boccard, J. C. Rivoal, P. Gadenne, X. Quelin, V. M. Shalaev, V. A. Shubin, Optical excitations of semicontinuous metal films, COLOQ6, 7-9 September, Bordeaux, France.	
		Vladimir M. Shalaev, Nonlinear Optics of Random Nanostructured Materials: Composites, Clusters, and Thin Films, XVI International Conference on Coherent and Nonlinear Optics (Moscow, Russia, June 29-July 3, 1998), ICONO.98 Technical Digest, URSS Publishers, p. 100 (1998).	
		V. M. Shalaev and A. K. Sarychev, Nonlinear Optics of Random Metal-Dielectric Films, in Nonlinear Optics.98. Materials, Fundamentals and Applications. Topical Meeting. Kauai, Hawaii, 10-14 August, 1998 IEEE Catalog Number 98CH36244, p. 22 (1998).	
		V. M. Shalaev, Fractal-surface-enhanced optical nonlinearities, Technical Digest of the Quantum Electronics and Laser Science Conference, QELS.97, Baltimore, May 18-23, 1997, 1997 OSA Technical Digest Series, v. 12, p. 88.	
		E. Poliakov, V. M. Shalaev, Nonlinear Optical Effects in Fractal Nanostructured Materials such as Nanocomposites and Self-Affine Surfaces, Chemistry and Physics of Small-Scale structures, Technical Digest Series, v. 2, Santa Fe, February 9-11, 1997; p. 49	

Examiner Signature		Date Considered	
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				First Named Inventor		ARMSTRONG, et al.
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		R. L. Armstrong, V. P. Safonov, N. N. Lepeshkin, W. Kim, and V. M. Shalaev, Giant optical nonlinearities of fractal colloid aggregates, SPIE, San Diego, p. 107, 1997	
		Vladimir M. Shalaev, Giant Optical Nonlinearities in Fractal Nanostructured Composites, Technical Digest, XX International Quantum Electronics Conference, Sydney (1996).	
		Vladimir M. Shalaev, J. Mercer, V.P. Safonov, and R. Botet, Nonlinear Optics of Fractal Nanocomposites and Self-Alline Surfaces, Technical Digest of Summer Topical Meeting, Nonlinear Optics: Materials, Fundamentals, and Applications, Maui, Hawaii, (1996).	
		V.A. Markel, E.B. Stechel, W. Kim, R. Armstrong, and Vladimir Shalaev, Optical Properties of fractal nanocomposites, Mat.Res.Soc Symp.Proc. vol.367, 417 (1995).	
		Vladimir Shalaev, R. Botet, M. Moskovits, Subwavelength localization of optical modes in fractals, In: Molecular Designed Ultrabne Nanostructured Materials, Mat.Res.Soc Symp.Proc. vol.351, 449 (1994).	
		A.V. Butenko, V.A. Markel, L.S. Muratov, V.M. Shalaev, and M.I. Stockman, Theory and Numerical Simulations of Optical Properties and Selective Photomodification of Fractal Clusters, Proc. X International Vavilov Conference on Nonlinear Optics; in: Nonlinear Optics, edited by S.G. Rautian, Nova Science Publishers, 275 (1992).	
		Yu.E. Danilova, S.V. Karpov, A.K. Popov, S.G. Rautian, V.P. Safonov, V.V. Slabko, V.M. Shalaev, and M.I. Stockman, Experimental Investigation of Optical Nonlinearities of Silver Fractal Clusters, Proc. X International Vavilov Conference on Nonlinear Optics; in: Nonlinear Optics, edited by S.G. Rautian, Nova Science Publishers, 295 (1992).	
		A.V. Butenko, P.A. Chubakov, Yu.E. Danilova, S.V. Karpov, A.K. Popov, S.G. Rautian, V.P. Safonov, V.V. Slabko, V.M. Shalaev, M.I. Stockman, Nonlinear Optics of Metal Fractal Clusters, in: Proc. International School on Lasers and Applications, Sayanogorsk, Eastern Siberia, USSR; Published by Institute for Physics, USSR Academy of Sci., Krasnoyarsk, 78 (1991).	
		V.M. Shalaev, M.I. Stockman, Optical properties of fractal clusters, Proc. 3-rd Int. Conf.Trends in Quantum Electronics., Romania, 201 (1988).	
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		BISWAS, A., et al., "Time-Resolved Spectroscopy of Laser Emission from Dye-doped Droplets," <i>Optics Letters</i> , Vol. 14, No. 4, pp 214-216 (February 15, 1989)	
		BOYD, R.W., et al., "Nonlinear Optical Properties of Nanocomposite Materials," <i>Pure Appl. Opt.</i> , Vol. 5, pp 505-512 (1996)	
		CHANG, R.K., et al., TEXTBOOK: "Optical Processes in Microcavities," <i>World Scientific</i> , Singapore-New Jersey-London-Hong Kong (1996) Table of Contents for reference	
		CHANG, R.K., et al. TEXTBOOK: "Surface Enhanced Raman Scattering," <i>Plenum Press</i> , New York - London (1982) Table of Contents for reference	
		CHINN, S.R., "Analysis of Counter-Pumped Small-Signal Fiber Raman Amplifiers," <i>Electronics Letters</i> , vol. 33, No. 7, pp 607-608 (March 27, 1997)	
		KERKER, M., et al., "Surface Enhanced Raman Scattering (SERS) of Citrate Ion Adsorbed on a Colloidal Silver," <i>Applied Optics</i> , Vol. 19, No. 19, pp 3253-3255 (October 1, 1980)	
		KNEIPP, K., et al., "Single Molecule Detection Using Surface-Enhanced Raman Scattering (SERS)," <i>Physical Review Letters</i> , Vol. 78, No. 9, pp 1667-1970, (March 3, 1997)	
		LEE, P.C., et al., "Adsorption and Surface-Enhanced Raman of Dyes on Silver and Gold Sols," <i>J. Phys. Chem.</i> , vol. 86, pp 3391-3395 (1982)	
		LIN, H.B., et al., "cw Nonlinear Optics in Droplet Microcavities Displaying Enhanced Gain," <i>Phys. Rev. Letters</i> , vol. 73, No. 18, pp 2440-2443 (October 31, 1994)	
		MARKEL, V.A., et al., "Small-Particle Composites. I. Linear Optical Properties," <i>Phys. Review B</i> , Vol. 53, No. 5, pp 2425-2436 (February 1, 1996)	

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		MARKEL, V.A., "Theory and Numerical Simulation of Optical Properties of Fractal Clusters," <i>Phys. Rev. B</i> , Vol. 43, No. 10, pp 8183-8195 (April 1, 1991)	
		MOSKOVITS, M., "Surface-Enhanced Spectroscopy," <i>Rev. Mod. Phys.</i> , Vol. 57, No. 3, Part I, pp 783-826 (July 1985)	
		NIE, S., et al., "Probing Single Molecules and single Nanoparticles by Surface-Enhanced Raman Scattering," <i>Science</i> , Vol. 275, pp 1102-1106 (February 21, 1997)	
		OWEN, J.F., et al., "Enhancement of Fluorescence Induced by Microstructure Resonances of a Dielectric Fiber," <i>Phys. Rev. Letters</i> , Vol. 47, No. 15, pp 1975-1078 (October 12, 1981)	
		PRASLER, M.A., et al., TEXTBOOK: "Near-Field Optics: Theory, Instrumentation, and Applications," <i>Wiley-Interscience Publication</i> , John Wiley & Sons, Inc., New York (1996) Table of Contents for reference	
		RAUTIAN, S.G., et al., "Surface-Enhanced Parametric Scattering of Light by Silver clusters," <i>JETP Lett.</i> , Vol. 47, No. 4, pp 243-246 (February 25, 1988)	
		RITCHIE, G., et al., "Luminescence of Dye Molecules Adsorbed at a Ag Surface," <i>Phys. Rev. B</i> , Vol. 24, No. 8, pp 4843-4846 (October 15, 1981)	
		SAFONOV, V.P., et al., "spectral Dependence of Selective Photomodification in Fractal Aggregates of Colloidal Particles," <i>Phys. Rev. Lett.</i> , Vol. 80, No. 5, pp 1102-1105 (February 2, 1998)	
		SHALAEV, V.M., et al., "Optical Properties of Fractal Clusters (susceptibility, Surface Enhanced Raman Scattering by Impurities)," <i>Sov. Phys. JETP</i> , Vol. 65, No. 2, pp 287-294 (February 1987)	
		SHALAEV, V.M., et al., "Electromagnetic Properties of Small-Particle Composites," <i>Phys. Reports</i> , vol. 272, pp 61-137 (1996)	

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		SHALAEV, V.M., "Nonlinear Optical Phenomena in Nanostructured Fractal Materials," <i>J. Nonlinear Op. Phys. & Mat.</i> , vol. 7, No. 1, pp 131-152 (1998)	
		SHALAEV, V.M., et al., "Small Particle Composites. II Nonlinear Optical Properties," <i>Phys. Rev. B</i> , Vol. 53, No. 5, pp 2437-2449 (February 1, 1996)	
		SILMAN, O., et al., "Surface-Enhanced Raman Scattering by Citrate on Colloidal Silver," <i>J. Phys. Chem.</i> , vol. 87, pp 1014-1023 (1983)	
		STOCKMAN, M.I., "chaos and spatial Correlations for Dipolar Eigenproblems," <i>Phys. Rev. Lett.</i> , Vol. 79, No. 23, pp 4562-4565 (December 8, 1997)	
		TZENG, H.M., et al., "Laser emission from Individual Droplets at Wavelengths Corresponding to Morphology-Dependent Resonances," <i>Optics Lett.</i> , Vol. 9, No. 11, pp 499-501 (November 1984)	
		YARIV, A., TEXTBOOK: "Quantum Electronics", Third Edition, <i>John Wiley & Sons</i> , New York, pp 466--467 and Table of Contents for reference (
		Xu, X-H, et al., "Direct Measurement of single-Molecule Diffusion and Photodecomposition in Free Solution," <i>Science</i> , Vol. 275, pp 1106-1109 (February 21, 1997)	
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		BERGER, A.J., et al., "Feasibility of Measuring Blood Glucose Concentration by Near-Infrared Raman Spectroscopy," <i>Spectrochimica Acta Part A</i> Vol.53, pp 287-292 (1997)	
		CAREY, P.R., "Raman Spectroscopy, the Sleeping Giant in Structural Biology, Awakes," <i>J Biol. Chem.</i> , Vol. 274, No. 38, pp 26625-26628 (Sep 17,1999)	
		ANDREWS, M.P., et al., "Integrated Optics Waveguide Spectroscopy of Self-Organizing Polymers and Fractal Composites," <i>Proc of SPIE</i> , Vol. 2042, pp 366-376 (1994)	
		McNICHOLS R.J., et al., <i>J of Biomedical Optics</i> , Vol.5(#1), pp 3-16 (January 2000) (internet printout provided)	
		McMAKIN, A., "Infrared Fruit-Tester Bounces Bad Apples," <i>Northwest Sci &Tech</i> , pp29-3- (Winter 2001)	
		PAPPAS, D., et al., "Raman Spectroscopy in Bioanalysis," <i>Talanta</i> , Vol. 51, pp 131-144 (2000)	
		PELLETIER, M., et al., "Keep Your Process in Control," <i>Photonics Spectra</i> , pp92-6 (Sep 2000)	
		STORRIE-LOMBARDI, M., et al., "Determining Glucose Levels from NIR Raman Spectra of Eyes," <i>NASA JPL New Technology Report NPO-204-14</i> pg 1 and 1a-9a (Apr 2000)	
		SULK R., et al., "Surface-Enhanced Raman Assays (SERA): Measurement of Bilirubin and Salicylate," <i>J. Raman Spectrosc.</i> , Vol. 30 pp 853-859 (1999)	
		THOMAS, G.A., et al., "Physics in the Whirlwind of Optical Communications," <i>Physics Today</i> , pp30-33 (Sep 2000)	
		TEXAS A & M U., "Raman Spectroscopy for Analyte Detection" from http://biomed.tamu.edu/obs/rs-analyte.htm (8/28/00)	
		WEBER, W.H., "Raman Scattering Becomes More Accessible," <i>Amer Inst of Phys</i> .pp 12/14 (Oct 2000)	

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		BURSTEIN, E., et al., Editors, CONFINED ELECTRONS AND PHOTONS, Textbook published by Plenum Press (NY and London), from Proceedings of a NATO Advanced Study Institute on Confined Electrons and Photons: New Physics and Applications, held July 13-26, 1993, Erice, Italy (1995 Plenum Press New York)			
		ARMSTRONG, R.L., "Nonlinear Optical Effects in Microcylinders and Microdroplets," TEXTBOOK, r.k. Chang and A.J. Campillo (eds); Opticdal Processes in Microcavities (1996) World Scientific, Singapore pp 257-283			
		SHIBATA, S., et al., "Preparation of Silica Microspheres Containing AG Nanoparticles," <i>J of Sol-Gel Sci and Tech</i> , Kluwer Academic Publ, Dordrecht, NL Vol 11, No. 3 pp 279-287 (8/1/1998)			
		WANG, H.Z., et al., "Low-Threshold Lasing of A. Rhodamine Dye Solution Embedded with Nanoparticles Fractal Agreeegates," <i>Optics Letters</i> , Optical Society of America, Washington US, Vol. 23, No. 10, pp 777-779 (15 May 1998)			
		KUROKAWA Y., et al., "Surface-Enhanced Raman Spectroscopic Detection of Carbonate, Sulfite, and Nucleic Acid Bases Using Polyvinyl Alcohol Film Doped with Silver Fine Particles," <i>Analytical Biochemisty</i> , Vol. 209, No. 2, pp 247-250 (1993)			
		KIM, W., et al., "Fractals in Microcavities: Giant Coupled, Multiplicative Enhancement of Optical Responses," <i>Phys. Review Letters</i> , 14 June 1999, PAS, USA, Vol. 82, No. 24, pp 4811-4814			
		SHUBIN, V.A., et al., "Surface-Plasmon-Enhanced Radiation Effectts in Confined Photonic Systems," <i>J of Lightwave Technology, IEEE</i> , New York US, Vol. 17, No. 11 (pp 2183-2190 (11/1999)			
		RAHM, S., "Performance of an Optical Detector Preamplifier," <i>Optics Letters</i> , Vol. 18, No. 18, Sep 15 1993			
		PURCELL, E.M., "Spontaneous Emission Probabilities at Radio Frequencies," <i>Physical Review</i> , Vol. 69, No. 11-12 page 681 and whole document (June 1-5, 1946)			
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		ARNOLD, S., et al., "Room-Temperature Microparticle-Based Persistent Spectral Hole Burning Memory," <i>Optics Letters</i> , Vol. 16, No. 6 pp 420-422 (March 16, 1991)	
		EMORY, S.R., et al., "Near-Field Surface-Enhanced Raman Spectroscopy on Single Silver Nanoparticles," <i>Anal. Chem.</i> , Vol. 69, pp 2631-2635 (1997)	
		OKAMOTO, S., et al., "Persistent Spectral Hole-Burning in CuCl Nanocrystals: Demonstration of Optical Data Storage," <i>Japanese J. Appl. Phys.</i> , Vol. 34, pp 128-130, Suppl 34-1 (1995)	
		SHARP, S.L., et al., "spectroscopy and Imaging Using the Photon Scanning-Tunneling Microscope," <i>Acc. Chem. Res.</i> , Vol. 26, p 377-382 (1993)	
		TSAI, D.P., et al., "Photon Scanning Tunneling Microscopy Images of Optical Excitations of Fractal Metal Colloid Clusters," <i>Phys. Rev. Letters</i> , Vol. 72, No. 26, pp 4149-4152 (June 27, 1994)	
		VO-DINH, T., et al., "Surface-Enhanced Raman Optical Data Storage: A New Optical Memory with Three-Dimensional Data Storage," <i>Rev. of Sci Instr.</i> , Vol. 65, No. 12, pp 3766-3770) Dec 1994)	
		VO-DINH, T., "Surface-Enhanced Raman Spectroscopy Using Metallic Nanostructures," <i>Trends in Analytical Chemistry</i> , Vol. 17, Nos. 8+9, pp 557-582 (1998)	
		ZEISEL, D., et al., "Near-Field Surface-Enhanced Raman Spectroscopy of Dye Molecules Adsorbed on Silver Island Films," <i>Chem. Phys. Letters</i> , Vol. 283, pp 381-385 (Feb 13, 1998)	

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